

Subpart 56.10—Components

§ 56.10-1 Selection and limitations of piping components (replaces 105 through 108).

(a) Pipe, tubing, pipe joining fittings, and piping system components, shall meet material and standard requirements of subpart 56.60 and shall meet the certification requirements of part 50 of this subchapter.

(b) The requirements in this subpart and subparts 56.15 through 56.25 shall be followed in lieu of those in 105 through 108 in ANSI-B31.1; however, certain requirements are marked “reproduced.”

[CGFR 68-82, 33 FR 18843, Dec. 18, 1968, as amended by CGFR 69-127, 35 FR 9978, June 17, 1970]

§ 56.10-5 Pipe.

(a) *General.* Pipe and tubing shall be selected as described in Table 56.60-1(a).

(b) *Ferrous pipe.* ASTM Specification A 53 (incorporated by reference, see § 56.01-2) furnace welded pipe shall not be used for combustible or flammable liquids within machinery spaces. (See §§ 30.10-15 and 30.10-22 of this chapter.)

(c) *Nonferrous pipe.* (See also § 56.60-20.) (1) Copper and brass pipe for water and steam service may be used for design pressures up to 250 pounds per square inch and for design temperatures to 406 °F.

(2) Copper and brass pipe for air may be used in accordance with the allowable stresses found from Table 56.60-1(a).

(2-a) Copper-nickel alloys may be used for water and steam service within the design stress and temperature limitations indicated in ANSI-B31.1.

(3) Copper tubing may be used for dead-end instrument service up to 1,000 pounds per square inch.

(4) Copper, brass, or aluminum pipe or tube shall not be used for flammable fluids except where specifically permitted by this part.

(5) Aluminum alloy pipe or tube may be used within the limitation stated in 123.2.7 of ANSI-B31.1 and paragraph (4) of this section (c)5.

(d) *Nonmetallic pipe.* Plastic pipe may be used subject to the conditions described in § 56.60-25.

[CGFR 68-82, 33 FR 18843, Dec. 18, 1968, as amended by CGFR 69-127, 35 FR 9978, June 17, 1970; CGFR 72-59R, 37 FR 6189, Mar. 25, 1972; CGD 77-140, 54 FR 40602, Oct. 2, 1989; CGD 95-028, 62 FR 51200, Sept. 30, 1997; USCG-2000-7790, 65 FR 58460, Sept. 29, 2000]

Subpart 56.15—Fittings

SOURCE: CGD 77-140, 54 FR 40602, Oct. 2, 1989, unless otherwise noted.

§ 56.15-1 Pipe joining fittings.

(a) Pipe joining fittings certified in accordance with subpart 50.25 of this subchapter are acceptable for use in piping systems.

(b) Threaded, flanged, socket-welding, buttwelding, and socket-brazing pipe joining fittings, made in accordance with the applicable standards in Tables 56.60-1(a) and 56.60-1(b) of this part and of materials complying with subpart 56.60 of this part, may be used in piping systems within the material, size, pressure, and temperature limitations of those standards and within any further limitations specified in this subchapter. Fittings must be designed for the maximum pressure to which they may be subjected, but in no case less than 50 pounds per square inch gage.

(c) Pipe joining fittings not accepted for use in piping systems in accordance with paragraph (b) of this section must meet the following:

(1) All pressure-containing materials must be accepted in accordance with § 56.60-1 of this part.

(2) Fittings must be designed so that the maximum allowable working pressure does not exceed one-fourth of the burst pressure or produce a primary stress greater than one-fourth of the ultimate tensile strength of the material for Class II systems and for all Class I, I-L, and II-L systems receiving ship motion dynamic analysis and non-destructive examination. For Class I, I-L, or II-L systems not receiving ship motion dynamic analysis and non-destructive examination under § 56.07-10(c) of this part, the maximum allowable working pressure must not exceed one-fifth of the burst pressure or